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ABSTRACT

Information on current research and projects, as well as general suggestions and conceptual material, is presented in 11 articles related to communication in rural areas of developing nations. These articles deal with (1) how information flows to small Nepalese farms; (2) an overview of communication in agricultural development projects, with descriptions of project models; (3) instruction of Bangladesh villagers via radio; (4) participatory communication in international agricultural research centers; (5) a Guatemalan radio education project in agricultural development; (6) an interview regarding agricultural education extension services; (7) a general analysis of the current status of rural education and agricultural development; (8) a rural development handbook for New Guinea village leaders; (9) regional universities; (10) highlights of the Fifth Pan-African Literacy Seminar; and (11) suggestions for agricultural information consulting. (CMV)

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TO AND FROM THE FIELD:

COMMUNICATIONS & AGRICULTURE

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TO AND FROM THE FIELD: COMMUNICATIONS & AGRICULTURE

How Information Flows To Small Nepalese Farms

In Nepal, where most people live on small subsistence farms, rural development is constrained by the divisive relationships between the rural poor and the rural rich and by those between urban and rural dwellers. The competition of needs — for food and fiber, mechanisms for marketing produce, effective governance, education, personal maintenance, and health care — also complicates the development process.

Critical to each of these factors is the flow of information. Information affects the technology of production; prices of such supplies as seed, feed, and fertilizers; the demands of local and distant markets; and other vital functions. More important, the willingness and ability of any group to change is directly related to the extent of information flow between that group and other groups.

This in mind, we at the Institute of Agriculture and Animal Science attempted to determine how information flows to 69 selected small farms in Nepal's Chitwan District, which contains the part of the Rapti Valley known as the Inner Terai. The particular farms were selected because they are near I.A.A.S. and because Institute students had already gathered interview data (related to farm operations and farm-family characteristics) on them.

(The three wards of Shardanagar Panchayat that were studied included no large farms, though a few farms in other wards of the Chitwan District are ten times the size of those surveyed. Seven persons and 6.45 large animals (buffalo, cattle, goats) lived on the average farm, which comprised 1.91 hectares. More than 85 percent of the farms grew at least three different cereal crops, and many had small kitchen gardens.)

Two patterns taken into account in this study are fairly common in the rural developing world. First, the major information channel seems to be word of mouth, and most information seems to come to small farms through visits from relatives, various officials, and commercial people.

Second, some farms in this area receive information from many different channels, and others are relatively cut off. Twenty of the 69 families were found to be receiving information on at least three of the four available communication channels: (1) radio, (2) letters, (3) membership in an organization, and (4) three or more official visits. Ten of these families received information through none of these channels, and 14 farms reported that only one of the channels was available to them.

Since the written word is sometimes a major source of agricultural information, each family was asked if any of its members could read. Only 7.2 percent of families had no literate members. Over 75 percent reported that a boy or man among their number could read, and 17.4 percent said that a girl in the household could. The largest farms had a significantly higher proportion of literate girls than the smaller farms did. Just over one-third of the farms reported receiving a newspaper, and only 14.5 percent said they received magazines. Twenty-six of the farmers stated that they tell others what they read.

With respect to farm size, the smallest farms and the largest farms reported getting more newspapers than the middle-size farms, perhaps because some of the farms under one bigha (0.67 hectares) in area may be owned by families that are also involved in retail shops and other non-farm activity. If these smallest farms are ignored and the other three sizes compared, there is significantly more newspaper reception on the very large farms (those over 4 bighas, or 2.71 hectares).

Radio receivers are owned by 33.8 percent of the farm families studied. These sets seemed to be evenly distributed among small, medium, and large farms, but families on very large farms owned a significantly larger number of receiving sets (27.9 percent). When asked for their preference among radio broadcasts heard, the farm families listed

(Continued on page 2)

An Overview of Communication in Agriculture Projects

If strategies of agricultural development sometimes seem muddled, perhaps it is partly because today's planners have wisely refrained from rejecting past models out of hand. Each model has been found wanting in one way or another, yet each has left something of value for subsequent programs.

Communication strategies are inescapably wedded to changes in farming practice. Small wonder, then, that recent spokesmen on the role of communication in agricultural development tend to talk softly: their own complex set of questions and variables must be reconciled with every change in the equally complex set they inherit from economists and sociologists.

A drift in communications thinking is identifiable, though. The rather narrow post-war focus on the transmission of messages from centralized or national sources has gradually given way to a more expansive emphasis upon a variety of kinds of communication among people at all levels and distances in a developing agricultural country. This shift, an inevitable product of change in the accepted strategies of agricultural development, can be traced through at least three distinct but related phases. Moreover, it appears to be entering a fourth phase, the implications of which merit a close look.

The Diffusion of Innovation Model

Applied to agricultural development, the Diffusion of Innovation Model reflected the rather simple observation that if *all* farmers could achieve yields as high as those of the *best* farmers, production would rise dramatically. It directed the communicator to focus attention on ways to persuade more farmers to adopt innovative agricultural practices and technologies.

Early research on the Diffusion Model concentrated on the series of stages

(Continued on page 2)

A publication of the Clearinghouse on Development Communication
Supported by the Development Support Bureau of the U.S. Agency for International Development

Information Flows (Continued)

"Nepali News" as the most popular program, with 78.3 percent of listeners claiming to hear it regularly. Another 56.5 percent reported that they liked broadcasts of songs and music. Only 17.4 percent reported hearing the teachers' training program, and 8.7 percent said they listened to the children's broadcast. No listener reported having heard an agricultural broadcast.

Among 23 listeners, the most popular time of day for listening was from 2:30 to 3:00 p.m., when 87 percent had their radios on. Another large group listened from 3:00 p.m. to 4:00 p.m., and fewer than half as many listeners were tuned in between 1:00 p.m. and 2:30 p.m.

More than twice as many farms received information by letters via postal service as read newspapers or listened to the radio. Here, the very large farms reported the lowest numbers receiving letters, large farms next, and the medium farms (one to two bighas) received the most. Again, the farms of less than one bigha did not fit the pattern.

Visits by professionals to the farm were more frequent than any of the other information contacts reported. All but one farm in the study had been visited by a representative of the Sajha Cooperative, and 88.4 percent had been visited by the Pradhan Panch. School teachers had been to 71.1 percent of farms, and health department personnel had set foot on 60.9 percent of the farms studied. Of all the official visits reported, the least visitation was done by the Junior Technical Assistant from the Department of Agriculture; he had been on only two (2.9 percent) of the 69 farms. Although farmers were asked about visitors from the Irrigation Department, whose canals go through all wards studied, none had seen anyone from that department.

On the assumption that organization membership would facilitate the exchange of information, farmers were asked if they belonged to any organizations. Only 5.8 percent said they did.

When asked about personal contacts, 42 percent of this group reported that relatives visited often, 45 percent said that their relatives came sometimes, and 13 percent said relatives' visits were rare. The highest proportion of relatives' visits were experienced by families on the smallest farms.

A large proportion of the families reported that they visited the bazaars. While 56 percent indicated that one person from the farm went to the bazaar, 34 percent stated that two persons from the farm attended regularly, and 8.6 percent said that three persons from the farm did. On the smaller farms, more reported two persons going to the bazaar than reported one person attending. On the largest farms, the reverse holds true.

Among the most frequently used channels for information flow to the farm are commercial visitors. Just under 60 percent of the farm families stated that they were visited by salesmen or vendors, and an equal proportion reported visits from persons trying to buy things. In both cases, the smaller farms claimed more commercial visits than the larger farms.

The results of our study suggest that personal visits might well form the central core of any program designed to provide information to these farms. These data further imply that information flow might be significantly increased by increasing the number of radio receivers in rural areas, and by designing broadcasts specifically for these potential listeners.

The data further suggest that since officials from various organizations do visit the farms, they could be utilized as effective channels of information flow. They could dispense verbal information, posters, charts, and even printed matter. With most farms having at least one reader present, the benefits of distributing written information are potentially great.

Finally, information seems to flow through the bazaar and the local tea houses. Therefore, demonstrations near the roads leading to such places, as well as posters, charts, and public radios, are also promising channels for communication in places like the Chitwan District.

■ **George H. Axinn and T. Mallick, Institute of Agriculture and Animal Science, Rampur, Nepal**

Overview (Continued)

through which each individual presumably must pass in adopting new techniques (awareness, interest, evaluation, trial, and adoption or rejection). In addition, diffusionists tried to modify communication strategies to meet the needs of various types of farmers (innovators, early adopters, early majority, late majority, and laggards). Programs based upon the Diffusion Model stressed information on how to evaluate and apply innovations, as well as messages designed to make people more receptive to change.

The Diffusion Model had its day. But studies and observations throughout the 1960s began to reveal its oversimplifications. It offered no way to deal with circumstantial factors (particularly credit, market, and tenure considerations) that might bar a farmer from accepting certain innovations even while acknowledging their worth. It also failed to include any test of whether the technologies it promoted truly suited the needs of the users. And its almost exclusive focus on the "opinion leader" and the "early adopter" often left out those most in need.

In terms of communications and communication policy, the Diffusion Model also contributed to a warped view of the importance of the mass media and especially media of non-local origin and control. It limited the communication task to that of bringing into the community ideas and information from outside. Feedback was thought of only as a way to test the adequacy of a message and to modify it to make it more effective, not as a source of ideas for changing the agricultural development strategy itself. The enormous variance between regions, and even from farm to farm, got little attention. The model did nothing to mitigate the emphasis so many countries were placing on national media out of concern for nation-building and for the development of a national consensus.

The Package Programs Model

The Package Approach to agricultural development grew out of a rising awareness that information is not by itself a sufficient source of improvement in agricultural productivity and in the rural family's welfare. Arthur Mosher's stress on the situational differences among farmers and between regions was quickly endorsed by others. As early as 1965, Early Heady was pointing out that campaigns of persuasion are fruitless unless the farmer also has a "bundle" of other techniques and aids (including, for example, credit, markets, irrigation, and such inputs as improved seeds, fertilizers, and pesticides).

Package Programs quickly found application the world over, and these applications were soon modified and refined. India's Intensive Agricultural Districts Program (IAD) revealed, as did similar programs elsewhere, that commitment and cooperation at the highest levels among a whole range of governmental agencies is a prerequisite to success. The Puebla Project in Mexico showed the kind of special effort needed to devise a Package Program that would help the poorest farmers within the context of an overall effort to raise total food production. The Masagana 99 Project in the Philippines demonstrated the difficulty of integrating such diverse "package" components as the extensive use of radio, the creation of new credit and price-support programs, the formation of farmers' interest groups and an interagency coordinating authority, and the involvement of top-level political leadership.

Not yet adequately evaluated, the Package Program appears to be surrounded less by harsh criticism than by tough questions. In particular, some observers have questioned how well the experience with single-crop Package Programs can be applied to those programs that involve many crops and to factors other than production. Another challenge has been posed by the lack of any dependable formula for forcing various governmental departments to work together and to buttress each other's efforts.

For the communicator, the significance of the Package Programs was that they called attention to previously unmet needs for communication among agency representatives and stressed upward communication from the rural family to the agencies involved in agricultural develop-

ment. They also reflected the recognition that only the farmer himself can report whether seeds or fertilizers are available at the appropriate time and places and that market malfunctions must be communicated to those who can make changes.

While sound in some respects, the Package Programs Model did little to shift attention away from national or centralized media and messages. It helped encourage awareness that different farmers may need different informational inputs, but its practitioners still viewed messages primarily as coming into the community from outside. Justification of localization and of investment in local media was based on the presumed value of both in making externally originated messages more accessible, comprehensive, and persuasive. Lamentably, autonomous local communications found little or no place in the Package Programs Model.

The Induced Innovation Model

Both the Diffusion Model and the Package Programs Model assumed as their starting point a "given" body of available farm technology and a "given" set of rural institutions. Only slowly did the growing awareness of how these change lead to a search for the forces behind change and for ways to make technology and institutions more responsive.

Probably the most convincing analysis along these lines was put forth by Vern Ruttan and Yujiro Hayami in 1972. They contended that technical change and rural institutions are "guided along an efficient path by price signals in the market, provided that the prices efficiently reflect changes in the supply and demand of products and factors and that there exists effective interaction among farmers, public research institutions, and private agricultural supply firms."

Ruttan and Hayami recommended several specific improvements that relate to communications. Public sector investments could modernize the marketing system "through the establishment of the information and communication linkages necessary for the efficient functioning of the product and factor markets." Organizing farmers into politically effective local and regional farm "bureaus" or "farmers' associations" could produce a valuable "dialectic interaction among farmers and research scientists and administrators." Improvement of communication within the scientific community could bring the agricultural research facilities of developing countries more fully into "the main currents of scientific and technical innovation."

This analysis applies most aptly to a commercial agriculture in which development is described in terms of increased production and marketable surpluses of market commodities. But heavy reliance on the market mechanism and on profit motivations may not be enough where bettering the lot of subsistence farmers, landless laborers, and other low-income rural people is proposed as an important development goal. "Appropriate technology" proponents, humanists, and even some hard-boiled economists may continue to view with growing impatience an approach that offers so little to those outside or on the fringes of the market economy.

The Fourth Way

All three models have brought and continue to bring significant contributions to agricultural progress. Yet, a strategy limited to them will probably be inadequate to the challenge of the years ahead. What is beginning to arouse attention is a model that is increasingly decentralized and user-oriented, one that pays attention to the needs and preferences of rural families, as well as to national production goals.

Ronald Havelock has described a user-oriented model as having five essential points:

> "First, that user need is the paramount consideration and the only acceptable value-stance for the change agent; second, that diagnosis of need always has to be an integral part of the total process; third, that the outside change agent should be nondirective, rarely, if ever, violating the integrity of the user by placing himself in a directive or expert status; fourth, that the internal resources, i.e., those resources already existing and easily accessible within the client system itself, should be fully utilized; and fifth, that self-initiated and self-applied innovation will have the strongest user commitment and the best chances for long-term survival."

Such a concept would be hard to apply fully in agricultural development, since so many decisions about the allocation of human and other resources are based on national goals that, initially at least, are as likely to consider the preferences of the rural family an obstacle to be overcome as an end to be satisfied. At the very least, however, development is beginning to be seen as a process of problem-solving through which those who face the problems can articulate and communicate to the "experts" their needs for knowledge or research. In agriculture, this is coinciding with a rising awareness of the wide variations and the rapid and often unforeseeable changes in regional and individual farm situations. These variations and changes help explain why national (as opposed to local) planning has so often brought disappointing results for the agricultural sector.

Ten years ago, communicators simply asked how messages about improved farming practices could be made more persuasive and brought more fully to the attention of the people on the land. Today, important new questions have emerged:

1. What channels of communication are needed to bring together the contributions of diverse public and private agencies in meeting agricultural development needs?
2. What communication innovations are required to help rural people clarify their options, organize their resources, and make those outside the community aware of their needs?

One change is slowly but surely making itself felt — the erosion of the traditional view of economic planners that labor and management (and this means the whole working population in a rural area) are merely "factors" of production. Once we accept that the well-being of each individual and each unit has validity alongside national goals, new requirements arise. In particular, communication media and strategies must be aimed at insuring that decisions that relate to development are in the hands of the people they affect.

With declining acceptance of the notion that the only important messages for agricultural development flow from the top down (or the center outward), more energy and imagination must be devoted to the wider dispersion of communication skills, resources, and control. This needed dispersion is primarily geographical, but it should also be viewed as broadening the communication opportunities of people who until now have listened without speaking.

The creation of farmers' organizations designed to voice farmers' concerns, exert pressure on national governments, and dispense timely agricultural market information seems a logical first step toward participatory development. In addition, it also seems clear that rural people need better opportunities to get experience with the written and spoken word: opportunities to put in writing messages that will be read, opportunities to speak in public and to gain confidence in doing so. Rural community organizations can contribute greatly to all of these goals and to their vehicle, functional literacy.

There are stubborn obstacles to such local initiatives. One is that significant economies of scale are possible only when expensive communication technologies can be concentrated in a few hands. Another is the fact that autonomous local media tend to be less professional in form and style than the well-staffed, well-financed national network. A third problem is political: besides their potentially divisive effect as promoters of regionalism, dispersed and independent media are too seldom used to give voice to a variety of local views and too often used simply to reinforce entrenched local power.

The agricultural communication strategy of the future will undoubtedly be a hybrid strategy. It will continue to include national and regional mass media. It will continue to stress ways to make the messages conveyed through these media more understandable and more relevant. But it will certainly also be directed ever more at unlocking the energy and creativity latent in the rural community.

■ **Bryant E. Kearl, Department of Agricultural Journalism, University of Wisconsin**

They Listen If They Can: Reaching Bangladesh Villagers Via Radio

Desh Amar Mati Amar — "My country, my land" — is a broadcasting program aimed at stimulating the overall development of rural Bangladesh. The program reflects the hypothesis that radio is the most appropriate technology to reach the villagers, enlist their support, and strengthen their capabilities. The wide-ranging broadcasts focus on forestation efforts, the domestication of animals and birds, the development of fisheries, the development and welfare of rural youth and women, and population control and family planning.

Although Bangladesh has a total population of nearly seventy- two million, it has issued only half a million radio licenses. But an estimated two million radios are in use within the country, and at times as many as one hundred people band together around a single radio for community listening.

Visits to the villages, as well as a survey of listening habits in four representative sections of the nation, have yielded some useful findings about the potential of this medium for agricultural development. First, a few glimpses of radio in action as observed in the countryside . . .

Traveling in Bangladesh inevitably means coming across a tea shop containing a radio blaring the latest music or, perhaps, some folk drama. Turn a radio on while in a marketplace, such as the weekly rural bazaar, and a crowd forms immediately. People in Bangladesh obviously like listening to the radio.

At-home radio listeners scattered in 64,000 rural villages probably make up the largest audience. Invariably, the relatively better-off landowner owns the radio and controls its use, and many villages have no radios at all. Still, it is primarily through this medium that information about agriculture is normally transmitted — sometimes a course in fish cultivation, other times some information about fertilizer.

Bangladesh has both land resources and the human resources needed to develop that land. What it desperately lacks is the material inputs and the knowledge at the village level to utilize them. Of the two shortages, that of technical inputs is often greatest. Fertilizer capable of boosting a rice crop may be mentioned over the radio when it is not available to the villager. Coordination is lacking and follow-up is minimal.

Visiting a rural village twenty miles from Khulna, a major port city in the south of the country, one of us was struck by how quickly radio was able to transmit information, not only from the capital of Dacca, but from 12,000 miles away. Just a few hours after the results of the American presidential election were known, a young animal-husbandry official chatting in a small candlelit room was able to announce that Jimmy Carter had been elected. His news source was a transistorized and battery-operated radio.

In one village near Rangpur, farmers were able to make better use of their land through local initiatives made possible by information supplied by radio. Their yields of rice per acre nearly doubled through use of fertilizers and high-yield seeds first heard about on radio.

To obtain more systematic data on how radio broadcasts affect villagers, Radio Bangladesh has conducted a four-region survey of listening habits.* UNICEF collaborated on the survey as part of its efforts to help increase Bangladesh's capacity to deliver basic services and produce agricultural inputs.

Radio was the medium of choice for the familiar general reasons — reach, economy, accessibility — and a few specific ones: watching motion pictures, for instance, is still considered a sin in rural Bangladesh except for the young generation, and TV viewing is catching on only slowly in the countryside.

The results of the personal interview survey were not conclusive, but they did point to the potential means of upgrading and extending radio use, and some findings illuminated problems endemic to radio use in severely underdeveloped countries.

First of all, the prohibitive costs of a receiver and radio batteries were revealed. Of the majority of the respondents who were farmers or day laborers, only 8.76 percent owned sets. Not surprisingly, land ownership, plus educational level, were the chief determinants of radio ownership.

Second, most radio owners stated that they feel "economic pressure" when they purchase batteries at the high rate. Moreover, there is an inverse relation between the cost of the battery and the amount of time the set is turned on, suggesting that increasing the supply of receivers and subsidizing their use may be desirable. The small number of respondents belonging to the higher income groups possessed 45.83 percent of all radio sets in Bangladesh.

In sum, very few rural people own radios, but community listening, usually in the house of a neighbor, is widespread. Most of the respondents who do not have their own radios listen in the village market, shops, or in a neighbor's house — indicating that if the villagers were provided with radios, they would listen more. Two-thirds of the respondents listen to the programs, with the most popular shows being news, news commentaries, and *Desh Amar Mati Amar*. Also popular are music, songs, and religious programs.

The respondents confirmed the investigators' hypothesis that radio is the most effective means of communication in rural Bangladesh. When asked to suggest improvements in the *Desh Amar Mati Amar* programs, most respondents merely advocated the prolongation of the programs. They also suggested further increasing the focus on increased food production, proposed a new program "item" for landless laborers, and requested more songs on crop production and more discussions on common human diseases.

On the basis of the data, the investigators reached some conclusions that development communication specialists in other countries may find worth pondering. They found that the farmers are genuinely interested in learning about food production, animal husbandry, and land use, and that a significant number of people want the programs lengthened. Less encouraging is the fact that two-thirds of all rural people are not receiving the agricultural message, either because they have no radios or they cannot maintain them.

Obviously, making radios cheaper to buy and maintain is Bangladesh's main communication problem. Getting people to listen is just as obviously not. ■

Moncef Bouhafa was information officer for UNICEF in Dacca, Bangladesh, for three years, before joining UNICEF headquarters in New York City. **Ronald Gross**, co-author of the recent volume *Communications Technologies in Higher Education*, has just returned from Bangladesh.

"Radio Use in Rural Bangladesh: An Evaluative Study on Effectiveness of Radio as a Means of Communication," compiled and edited by Sufia Khanam, Radio Bangladesh, 1976-1977. (For a copy of the report, write to: UNICEF, GPO Box 58, Dacca, Bangladesh.)

Fulbright-Hays Awards in Communications

The Council for International Exchange of Scholars (CIES), Eleven Dupont Circle, N.W., Washington, D.C. 20036, is now accepting applications from U.S. citizens for the following Fulbright openings:

1. *Film and Television Institute, Poona, India:* a film-production consultant with technical experience in production of 16mm films for educational television. Ph.D.s in communications or educational television preferred. Starting June/July 1978.
2. *University of Brasilia, Brazil:* Lecturers in one or more of the following at undergraduate and graduate levels: communication theory and research; psychology of social communications; communication technology and social and cultural change; communications in formal organizations; communication media and nonformal education; communications and development. February-December 1979. Portuguese needed.

The senior Fulbright-Hays program also provides opportunities for scholars from abroad to lecture or conduct post-doctoral research in the United States.

Participatory Communication in International Agricultural Research Centers

The current trend in agricultural communication in developing countries is toward emphasizing the message and the social dynamics of its transmission. Advanced technology in communication media, important as it may be, is receiving commensurately less attention. The strongest voices warn that the medium is not the message in agricultural development, that farmers need information about new technology, and that extension and communication networks do little good if the messages extended and communicated are not relevant. In other words, we have been urged to look first for factual, scientific, and problem-oriented messages, and then for technology and media to transfer them. We are being told, in effect, that the problems of agricultural development stem from the absence of adequate scientific knowledge in a form that farmers can use.

An historical irony underlies this communication problem and helps explain the aforementioned trend. Plant breeding and scientific agricultural experimentation have been carried out chiefly in the temperate zones in which the industrial countries lie, but most of the plants on which humankind now depends for food seem to have originated in the tropical and the sub-tropical belts that today include the less developed countries.

Since the systems of cultivating food crops in many of these poorer countries have remained largely unimproved, current agricultural development policies emphasize agricultural research aimed at coming up with better plant varieties and improved methods of cultivation. This approach requires the development of a special communication strategy capable of linking research personnel in the developing countries with both farmers in their countries and the international agricultural research centers. Indeed, the communication function of the newly established network of international agricultural research centers is unique and challenging. Established under the supervision of the Consultative Group on International Agricultural Research (CGIAR), these centers reflect the assumption that major increases in agricultural development and food production will be achieved through improving agricultural research in developing countries. Charged with developing improved varieties, efficient farming systems, and better agricultural practices, they are also expected to establish a viable international communication network capable of transferring the newly developed technology to the national research and production institutions in the developing countries.

The communication function of the International Center for Agricultural Research in the Dry Areas (ICARDA), for example, is critical in the early stage of formulating the research program. Scientists attempt to learn at this point from their colleagues in the countries of the region about the main issues and problems hampering the development and improvement of local food crops. For instance, national research institutions in ICARDA's region have expressed concern about the need to find solutions to the problems of excessive losses in lentils and chickpeas caused by labor shortages during harvest time. This problem requires either the development of tall and erect varieties suitable for mechanized harvesting or the adaptation of harvesting machines to accommodate the characteristics of existing varieties. ICARDA scientists are working on both alternatives. It takes time to find the solution, but herein resides the communication challenge and task: The process involves creative interaction between ICARDA research workers and the scientists of the national programs in the region before the technology is presented to the farmers for testing and adaptation. Contacts with the national research scientists are maintained through systematic visits and information exchange, and new varieties are thus being co-developed by the national and international institutions.

Equally important, participation of all concerned is ensured, but separating lines between national and international efforts are not drawn. The new product is accepted by the national scientists because their own efforts are reflected in its development. This acceptance is the main step in crossing national borders with technology that makes a difference where it counts — in farmers' fields.

(Part II of this article will cover the complementary communication process being established to move newly developed technology from the national research institutions to the farmers' fields.)

■ **Sawki Barghouti, Head of Communication and Training, ICARDA, Aleppo, Syria**

On File at ERIC

Recent entries in the ERIC (Educational Resources Information Center) file include two discussions of rural development with an emphasis on agriculture.

- Bowman, M.J. *Rural People and Rural Economic Development. IIEP Seminar Paper: 21.* Paris: UNESCO, 1975, 120 p. (ED 135 533).

  This paper discusses development as a process involving the generation, diffusion, and realization of new opportunities. The following topics are discussed: (1) the development process, including such issues as visible unemployment, rural to urban migration, the dualism of labor markets, population growth, and the disequilibrium of economic life in the development stage; (2) the adaptive and innovative attributes of human beings; (3) an economic analysis of people-changing processes, skill mobility, and the markets for "jobs" and "work;" (4) progressive agriculture, including its relationship to efficient information systems; (5) the rural non-farm economy, including education, communication, and innovation in the non-farm enterprise; (6) strategies for enlarging opportunities, including a focus on the interdependencies of education and development and on economic incentives and agricultural progress. Available from International Institute for Educational Planning, 7-9 Rue Eugene Delacroix, 75016 Paris, France. ($.60). Also available from EDRS in microfiche only for $.83 plus postage.

- Medlin, W.K. *Problems in Planning Rural Education for Agricultural and Nutrition Development: A Review of Relevant Findings from Communications Research. IIEP Seminar Paper: 16.* Paris: UNESCO, 1975, 56 p. (ED 135 529).

  Rural education research and field experience related to the communication of relevant knowledge to disadvantaged rural populations in the developing nations are examined. Findings indicate that decisions on knowledge dissemination are usually strongly influenced by groups with social and/or political weight; that clients tend to learn most effectively when engaged in decision-making related to their needs; and that curricular and instructional development are most successful when actual and potential utilization of knowledge by clients, as well as the appropriateness of instructional theories to a given rural setting, are taken into account. Available from International Institute for Educational Planning, 7-9 Rue Eugene Delacroix, 75016 Paris, France ($.60). Also available from EDRS in microfiche only for $.83 plus postage.

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■ **Barbara B. Minor, Publications Coordinator, ERIC Clearinghouse on Information Resources**

THE BASIC VILLAGE EDUCATION PROJECT

A Day in Momostenango

An affable blanket-seller who thought the empty backseat of my compact car reasonable grounds for a quick introduction was the first of many Guatemalans to help me form a firsthand impression of the impact of Basic Village Education. After giving him a moment to arrange his bale of wares and then plying him with questions about the market he had attended in San Francisco el Alto the day before, I sued for the information I really wanted. Did he listen to Radio Momostenango? He did, regularly.

Radio Momostenango has been broadcasting agricultural information and advice, public service announcements, and indigenous music and drama to the villagers of Momostenango eight hours a day six days a week since 1976. The second of two stations established jointly by the Academy for Educational Development on contract to A.I.D. and by the Guatemalan Government as part of the five-year experiment in agricultural communications known as the Basic Village Education Project, the station broadcasts to a potential audience of 900,000 listeners in split shifts and two languages, Quiché and Spanish.

I didn't have to ask the next villager I spoke to whether he listened to Radio Momostenango. He works there, logging in the letters the station receives from its listeners. Ricardo was busy with the day's mail when I arrived, but he put aside his work long enough to acquaint me with the broadcast equipment, introduce the Spanish-speaking "disc jockey" Cesar, and locate the station manager.

The number of employees and the level of sophistication of the equipment at Radio Momostenango are deliberately kept low so that the Guatemalan Government will be able to maintain both when outside support is withdrawn at the close of the experimental phase in early 1978. The station itself consists of three small rooms with an entrance in common. The station's broadcast equipment cost only $25,000. The staff is composed of three full-time and two part-time employees; a Spanish-speaking broadcaster and a Quiché-speaking broadcaster, each of whom is on the air for a few hours a day; a project secretary, who handles the station's paperwork and helps maintain the equipment; the station manager, who oversees all operations, contributes to program development, and doubles as an announcer; and a watchman.

The station manager, another unabashedly partisan informant, represented my third yes vote. Mario Mendizabal didn't give me much time to reflect on how my informal poll was going, however. Within 20 minutes of my arrival, he had ushered me out of the hilltop station and into the village — a neat analogy, I later thought, for the way BVE works.

The BVE experiment includes four communication treatments, each of which is used in a different area and matched with a control. The first is radio alone. The second is radio combined with personal contacts made by a BVE-trained monitor. The third makes coordinated use of radio, a monitor, and an agronomist. The fourth, added when the project was modified in 1975, relies upon the unaided efforts of a monitor working in an area unreached by the BVE radio signal.

Mario's idea was to let me see for myself, and the first thing I saw was what appeared to be a ceremony in progress on the far side of the hill. In the shadow of the radio tower and within earshot of a program on modern agricultural practices, a dozen older villagers were burning the previous year's broken pottery and the prize specimens of the last maize crop. It was the thirteenth day of the Mayan calendar, the time to make offerings for the dead and for the coming harvest.

BVE's target audience in several respects typifies peasant farmers throughout the Third World. The average farmer reached by BVE has little or no in-school education, works at most a few acres of relatively unproductive land, lives some distance from an industrial and financial center, and out of necessity derives some income from nonagricultural activities.

Almost mincing steps as the mid-morning heat began to take its toll, we negotiated several steep slopes (the perpetual traverse of which must make the Indian villagers lion-hearted) to get to the edge of town. After pausing to inspect the local geophysical attraction, wind-lashed limestone spires twice the height of neighboring pines, we set foot on one farmer's field and laid eyes on many. A few stalk-strewn patches looked planed, but most have been contoured to thwart erosion — as recommended on Radio Momostenango.

Five Years in Guatemala

The Basic Village Education Project in Guatemala has investigated the effectiveness of various combinations of mass media and interpersonal approaches in reaching the small farmer. Some of the findings identified after five years of study seem to have major implications for other projects utilizing radio as a medium in agricultural development. Presenting these findings along with some of the background assumptions, capsulizing the educational philosophy behind BVE, and touching upon the research methods used may set the stage for discussion.

Major Findings

Major findings at this point suggest first of all that a high level of radio listenership can be achieved — even in a subsistence farm population. During the first year of the BVE Project, over 90 percent of the respondents in the Eastern project area reported listening to "Radio Quezada."

Second, "educational" radio programming can develop a strong following. During the first years of the project, 35 percent of radio listeners reported a preference for educational programs over other program types, and preference for such programs has continued to increase over the life of the project. In the final experimental year, 1976, over 50 percent of all radio listeners polled preferred educational programming. Most of the shift reflected the erosion of a long-standing preference for popular music programs.

Third, the amount of time spent listening to radio programs may increase as the result of a project such as BVE. In BVE's first year, only 5 percent of the farmers reported listening to the radio all day. In the final year, the percentage had increased to 15 percent — probably an indication that more farmers were listening to transistor radios in the field while they worked.

Fourth, educational radio programming can increase listeners' useful knowledge of agriculture significantly. During the first year of programming, 63 percent of the respondents reported that they obtained agricultural information from the radio, and this proportion increased over the project's duration. During the final experimental year, 73 percent reported using radio as a source of agricultural information.

Even when respondents were asked to choose between several sources of information on a particular agricultural practice, radio remained an important source. During the first year of BVE, 52 percent of those reporting new information about fertilizer use reported that radio was their main source of such information. Similar percentages were established for later experimental years.

Fifth, educational radio programming can affect agricultural practice positively. Individuals receiving the BVE educational programming changed many of their agricultural practices over a two-year period, a 65-item survey showed. (So did farmers in the control areas, but change among

The agricultural messages broadcast over Radio Momostenango and its sister station in Eastern Guatemala, Radio Quezada, are developed by agronomists and the production staff at the project's headquarters and production studios in Guatemala City. The primary source of technical information is the Ministry of Agriculture, which also reviews and approves each theme used. Farmers, agricultural research institutes, and agencies that supply goods and services to farmers also spot problems and provide data.

The next leg of the hike ended at the open gate of one of Momostenango's blanket "factories," an open-air courtyard surrounded by four occupied work stations set up under elongated eaves. A polite woman of sixty emerged from recesses that seemed to be permanent living quarters and, on behalf of the weavers, asked Mario why we had come. He mentioned the radio station, she nodded, and the talk turned to some of the finer points of foot-loomed wraps.

Villages were singled out for inclusion in the BVE project on the basis of their representativeness of subsistence economies. Socio-economic factors, farm size, rainfall patterns, population distribution, agricultural practices, and land productivity were assessed prior to site selection, as was government census information.

From the weaver's cooperative, we headed in the direction of a rocky butte that affords an eagle's view of the town and the land. On the way we wended through a thinly settled area in which the sounds of daily chores mingled in several yards and gardens with those of Radio Momostenango. At the moment, the fare was music.

To attract a large and loyal listening audience, BVE's programmers devote roughly 80 percent of all broadcast time to non-agricultural programs: music, children's shows, local news, message exchanges, comic drama, and family entertainment. The core agricultural program consists of agricultural "magazines," radio novels enriched with information on crops and farming techniques, question-and-answer sessions with agronomists, and single-message spots.

The panoramic view duly noted and appreciated, the object became a visit to the community hot springs. As we drew closer, more and more of the people who stopped to exchange pleasantries with Mario looked fresh-scrubbed. Two or three small boys we met on the way alluded to something "Don Mario" had said in a recent boys' hour broadcast.

Besides determining the impact of radio used alone and in combination with other channels of communication, the BVE evaluation team will draw cross-cultural comparisons based on the differences between project results in the Oriente *region and the findings in the* Occidente *region. The team's report is scheduled for completion in mid-1978.*

The rugged downhill trail to the springs appeared intended for the sure of foot only. Yet, a sizable share of the local women and children and some of the village men were scouring newly made blankets on the rocks, bathing, and washing clothes. A few were actually steeping tea in metal kettles placed strategically in shallow boiling springs. This was obviously not a tourist spot, but Mario's presence seemed to soothe the suspicious.

BVE's future will be determined by the Guatemalan government, which has assumed sole support of the BVE operation in the Oriente *since the project's experimental phase closed there in December 1976. With the reorganization of the Ministry of Education in 1977, proposals to broaden BVE programs to include rural family education and literacy training, to increase the number of field monitors, and to construct additional production and recording studios have been advanced.*

Winded and relaxed, we spent the remaining time before Mario's afternoon broadcast discussing what we had seen. I confessed that the tour couldn't have been more telling or effective if it had been staged. His laugh let me know both that it wasn't and that his rapport with the villagers is such that he probably could have pulled off such a maneuver had he wanted to. ■ **K.C.**

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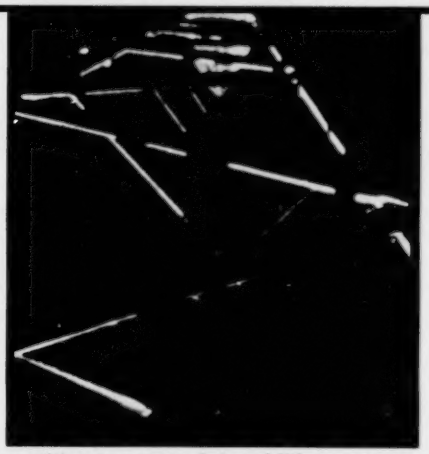
this group was considerably less marked.)

Of those respondents who reported changing their agricultural practices during the first year of BVE programming, 42 percent identified radio as the primary motivator of such change. Radio was also identified as an important source of change during the second programming year (when 32 percent of the changers were influenced primarily by radio), although radio's importance appeared to diminish slightly as that of word of mouth grew. Such results probably indicate that radio has the most profound impact on "earlier changers" while "later changers" are more influenced by the diffusion of information through friends and neighbors.



BVE Programming

Specific elements of BVE programming that presumably relate to its positive impact number at least five.

1. *Needs assessment.* Since the programs were aimed mainly at improving agricultural practice, extensive assessment was made in the field of existing levels of practice so that programming could be geared to realistic development goals. Characteristics of the audience were also studied and taken into account in program planning. Such characteristics included levels of literacy, orientation toward risk-taking, economic factors, general farming practices, and related factors of mobility, health, and nutrition.

2. *Targeted information.* Each message system had very specifically tailored information to which the farmer was in a position to respond. In addition, program messages were repeated at different periods of the day and times of the month so that farmers had several opportunities to be exposed to each particular piece of information. Moreover, programs were geared as closely as possible to the agricultural year so that messages were timely and seasonal.

3. *Localized and personalized messages.* The radio station was located in the environs it served — a factor that may have been more important than first thought. The radio thus provided not only a localized, but also a highly personalized, communication system. The general acceptance of this "personalized" radio is borne out by the many letters and requests received by the station.

4. *Evaluation feedback link.* The programming system included a time-sampling procedure, a limited field evaluation conducted monthly from a random sample so programmers could get immediate feedback on the acceptability and usefulness of material in the program.

5. *Program feedback link.* In addition to evaluation feedback, the BVE programming system included various mechanisms for obtaining from the field feedback that could be used to make program content more relevant to farmers' needs. Field agronomists and field monitors were two such "mechanisms."

The key characteristics of a radio program that is accepted by a peasant target population appear to relate to the extent to which (1) recommendations fit the population's specific needs; (2) messages are scheduled and repeated at appropriate times; (3) field-evaluation feedback is used in programming; (4) agronomists and/or monitors contribute directly to programming content; and (5) radio broadcasts and operations are localized.

It is also clear that while appropriate radio programming can lead directly to both gains in knowledge and changes in behavior, such programmed messages may reach beyond the target audience via friends and neighbors. Radio and these more traditional sources of agricultural information thus interact with and reinforce each other.

■ **Edgar G. Nesman, Thomas A. Rich, and Sara G. Rivers, BVE Evaluation Project, University of South Florida**

AN INTERVIEW WITH DANIEL BENOR

An Israeli agronomist and extension-service expert, Daniel Benor has spent more than 20 years setting up agricultural extension services that now affect some 50 million farm families in some of the world's poorest countries. His approach to extension is described at length in a recent World Bank monograph, "Agricultural Extension: The Training and Visit System," which he wrote with James Q. Harrison.

On February 8, 1978, Benor met with the staffs of the Clearinghouse and the Academy for Educational Development, of which the Clearinghouse is part. Relishing the role of devil's advocate in a roomful of the media-minded, Benor put forth his belief that the mass media are best used in agricultural development to interest and motivate farmers rather than to transfer basic information and skills.

Watchful readers are invited to write the editor in response to the following transcription of Benor's provocative remarks.

Staff: How did you get involved in agricultural extension work?

Benor: I was a cotton and wheat farmer myself for many years before I studied extension principles. One thing led to another.

Staff: How did your technique evolve?

Benor: Cotton and wheat happened to be the main crops in the Seyhan project area in Turkey where I started out. It was easy to convince those farmers that I knew what I was talking about, and once the farmers trusted me, I had no trouble commanding an audience. The farmers listened. Now I don't believe that farmers won't listen, only that they won't listen to people with nothing useful and timely to say.

Incidentally, it's no fun to work in the Seyhan project anymore. The cotton and wheat grown there scratch the ceiling all the time. It's impossible to get higher yields than Turkish farmers get there. When we started, no farmer got 2.5 tons of wheat per hectare. After four years, the same remained true. But all of them used to get less than that amount and now every single one gets more.

Staff: You scarcely refer in your monograph to the use of media in your style of agricultural extension work. Why? Because you stress a face-to-face approach?

Benor: First of all, our method is not face-to-face. I don't think much of extension services that try to reach each farmer face-to-face. An extension service should be able to deliver vital messages to all of the farmers without making personal contact with all of them. We use "contact farmers" to deliver the messages to the entire farm population. And by contact farmers, I don't mean the biggest or richest farmers, but ordinary farmers who have earned their neighbors' trust and respect. If you reach 10 percent of the farmers, the others will be reached, either through seeing innovations in the field or hearing about them.

Staff: How are the contact farmers selected?

Benor: By the community and the extension agents together. But the farmers are not in government employ. Once you pay the extension agent, other farmers will consider him special, an agent of the government. So contact farmers get nothing but know-how for their trouble. We are not in the business of trading goods or seeds for work. The main qualification is that the contact farmer is accepted by the society. He is not someone with extra privileges.

Staff: How do you select the people who train the contact farmers?

Benor: Have you ever seen a bank without money or a supermarket without stock on its shelves? The only thing we sell is know-how, so we pay a lot of attention to training the extension agents. Having a strong, single line of command is essential to our success. The ratio of extension agents to extension officers is about one to six or eight, and that ratio is the same at every level of the service. The agents are trained by the officers once a fortnight at the same time and the same place each session.

Staff: In your monograph, you say that restricting the size of a project area is preferable to "diluting" the power of the agricultural extension service, and you suggest that an agent-client ratio within the range of one to 500 and one to 800 is best for most kinds of agriculture. Have you ever considered using media to extend the area of a project's impact to include a second tier of clients?

Benor: I can offer no scientific explanation of how I arrived at that agent-client ratio. Experience was my teacher. Of course, messages cost more to deliver as the ratio shrinks. But we never use media *instead* of the extension agent. Media are treated not as labor-substitutes but as complements. Radio, for example, cannot teach farmers to use elevated nurseries in paddy production. What it can do is raise the interest of the farmers in this technique. It can also provide simple instructions and recommendations to the farmer who has had some contact with an agent.

I am delighted to involve available media and media specialists in the effort, but I don't think that even TV can train farmers in field practices. Farmers need people to demonstrate and to check their progress and to help them take into account the special characteristics of their own plots of land. TV cannot be specific enough. I appreciate the media, but I regard them as helpers.

Staff: You contend, then, that mass media are relatively unimportant — deserving, say, only 5 percent of a project's budget?

Benor: I can't give you a precise figure. In extremely underdeveloped countries, the media can be used to attract farmers to programs and make them aware of their options. But in such countries, highly specific and centrally developed messages sent out in lieu of extension agents don't work. The same tack works among the most highly agriculturally developed countries. There, people heed good ideas that reach them via the media and have the means to try those ideas out. For countries between the extremes, other strategies have to be used.

Staff: How do you identify where, when, and how to use the media to supplement agent contacts, especially where no extension service exists?

Benor: I have no specific recipes, but I do know that the media will have little impact unless their use is combined with an extension service. Farmers may listen, but they won't follow, and that makes all the difference. With extension agents in the field, advice spread via the media can be effective. I myself broadcast five minutes of highly technical information over radio to farmers every morning for years.

Staff: How are you conveying information through all levels of the agricultural extension service and insuring that the information the farmers get is appropriate and timely?

Benor: This is where the media can be helpful. When we have a message by a top Subject Matter Specialist, or SMS, no more than two weeks ever goes by without the opportunity to deliver that message. Five thousand extension agents in West Bengal, for example, can get any message to the target audience in two, never more than three, weeks. Each group of 50 to 60 extension agents is overseen by an SMS. SMSs pervade several levels of the system, and these mid-level SMSs are not mere postmen; they interpret the message in light of local needs and make the necessary adjustments before making carefully-tailored recommendations.

Staff: Is this entire process oral? If so, how do you know that the message remains intact and consistent across all these transfers?

Benor: The training program for extension agents is different in each state because conditions differ. Messages do change, but that change reflects a local reality. Training sessions consist of lectures, discussion, and two- or three-hour sessions in the fields. That way, the agents know what they are talking about and rote memory becomes relatively less important. Agents also receive printed hand-outs to refer to later.

Staff: Does the farmer get such hand-outs?

Benor: No, the rural majorities are illiterate in many of our project areas. What the farmer gets is a verbal explanation that he can understand. He is also exposed to illustrated posters. Farmers have remarkable memories for useful information because constant practice reinforces their knowledge. Some illiterate farmers amaze me with their ability to rattle off the scientific names of plants and plant diseases.

Staff: Can what you are doing be done in areas where there are not enough extension agents?

Benor: I have never been to a place where there are not enough extension agents. Extension agents don't have to have high school diplomas and two or more years of training in agricultural science and extension principles.

In Nepal, for example, where there are not enough high school graduates to serve as such agents, we selected the better farmers, hired them on a contract basis, and trained them to do extension work. With the back-stopping of the SMSs and the research people, they do a fine job. The only place where an extension service cannot be started is where all farmers get the same yields and use the best existing techniques to get them. A shortage of good people to work in the service is never the problem.

Staff: How do you make sure that your Subject Matter Specialists are getting accurate information about local conditions and that they prepare the right messages?

Benor: Subject Matter Specialists spend one-third of their time doing adaptive research, one-third in the farmers' fields, and one-third training the extension agents. They have plenty of opportunities to see the impact of what they are doing and to confront the farmers' problems firsthand. In short, the Subject Matter Specialists know the facts of life. The best indicators of the appropriateness of the messages are increased production and income and the fact that the inputs the agents recommend go out of stock so rapidly.

Staff: You are describing a picture in which the agents have the answers to the farmers' problems, a situation in which what you call "know-how" is all that's needed to make things work. But aren't agricultural conditions in some parts of the world so deteriorated that even the experts are stumped?

Benor: Yes. The extension service can't work miracles. It can't make rain. It can't turn back floodtides. Farmers understand that. In Sri Lanka, for example, we started a project in the midst of a drought that lasted for years. The attitude of the farmers there was sane. "The yields are terrible," they said, "but the little we get is thanks to the extension agent's help." Success is relative, so all we can do is to make the best use of existing resources.

Staff: It's easy to go along with you when you say that learning agriculture from an extension agent beats learning agriculture from a radio or TV presence. But doesn't training agents, giving them on-the-spot refresher training every two weeks, and providing them with vehicles cost a small fortune?

Benor: We figure that in Indonesia the whole exercise can be paid for completely if the farmer can increase his yields of only one of his crops, paddy, the equivalent of 12 kg. per hectare. Yet, Indonesian farmers often realize half-ton gains per hectare. With our approach, the amount of government money spent on each farm family is well below that spent in any country. Cost is scarcely a consideration. No country in the world can afford *not* to spend this money.

Staff: How do you know that agents' reports reflect what is actually happening?

Benor: It's simple, really. We don't rely on written reports at all. People *at every level of the system* pay unannounced, even spur-of-the-moment, visits to the farmers' fields. The fields are the final test. What's more, if the extension agent isn't doing a good job, his supervisor is held responsible. The incentive to spot-check often and carefully is obviously great in a system like this, and that incentive works.

Staff: When a project works less than successfully, what usually goes wrong?

Benor: There are no failures as far as I am concerned. But there are political problems. In particular, transferring agents from the aegis of one agency to another in order to establish a single line of command causes problems. But it can be done. People at the top have a stake in making agencies more effective; they just have to be convinced of the enormous potential for positive change that attaches to the risk they take.

Staff: But what do you do when existing agricultural extension services and government bureaucracies resist your methods?

Benor: I've heard the kind of stories that your question implies you have heard. Their main thread is "this will never work." Naive as it may sound, though, things "destined" to fail often do work if it is kept uppermost in the minds of those involved that satisfaction in one's work is a universal goal — for the extension worker and the government bureaucrat, as well as for the farmer.

Enthusiasm and personal effectiveness form the same kind of self-perpetuating cycle that dispiritedness and personal ineffectiveness do. The excitement of the well-trained, and so well-received, agricultural extension worker is wonderful to see, and it lasts.

Staff: Would you say, then, that the essence of your approach is organizational change?

Benor: Yes. Teaching and training are vital, but quite a few people know how to teach and train. If I stress the importance of organizational change, it is because that is ultimately more difficult and is a prerequisite to whatever else happens.

Having the right message is also vital, and not just for extension agents. I have the "right message" when I approach high-level ministers and government supervisors.

Staff: In your booklet, you say that a main problem with existing agricultural extension services is that the agents are overburdened and expected to carry messages on too many subjects. In your view, would eliminating that problem require setting up separate services for each sector?

Benor: No. One extension service is enough. Most development problems relate somehow to farming and income-generating activities, and when explicitly agricultural messages are not pressing, extension agents can tell the farmer about the nutritional value of local crops and can relate increased agricultural productivity to decreased needs for large families. But the agricultural message takes priority, and extension agents should not be burdened with jobs like dispensing pills or keeping the farmers' credit records. Such time-consuming activities deflect the agents' energies and weaken the program.

Staff: Any final words?

Benor: Yes. To me, organizational structure is the key to what I am doing. But I regard my work as primarily a communication service, so in one sense we share a deep interest.

"Agricultural Extension: The Training and Visit System" can be obtained from the World Bank, 1818 H Street, N.W., Washington, D.C. 20433, U.S.A.

Rural Education and Agricultural Development — On and Off The Official Record

Agricultural development projects do not operate in virgin territory. Their success is conditioned primarily by the receptivity and adaptability of the rural people. Rural education is thus its cornerstone.

> "In large areas of the world production per man is low — so low that many families barely glean enough calories from their meager crops to keep them alive . . . The critical need for better and more widespread efforts in agricultural education and extension must be recognized . . . (vital are the) adoption of approved extension methods; . . . adequate training of personnel needed in carrying into action the agricultural programs . . .; general and vocational education among farm people . . ."

Such were the very first findings adopted in Quebec City by the First Session of the Food and Agriculture Organization of the United Nations. The time: October 1945.

Thirty-two years later the Joint FAO/ILO/UNESCO Advisory Committee on Agricultural Education (the JAC), meeting in Geneva for its fourth session, reported as follows:

> "Member States need to give priority to the training of agricultural personnel in their development plans . . . efforts should be made to give attention to organized participation of rural people in the planning and implementation of rural development programs, including training programs . . . (There is) need for a much more dynamic approach to agricultural education and training than is presently the case."

In layman's English, this diplomatic language means that 17 specialists from all continents meeting in the spring of 1977 found training of agricultural personnel throughout the developing world on the lower rungs of governments' priority scales and the participation of rural people in their own education grossly inadequate.

The preamble of the 1977 JAC report could thus have been taken word per word from the Quebec report: "millions of families barely glean enough calories from their meager crops to keep them alive." In fact, their number has increased in the intervening three decades.

During these 30 years the pace of change was hectic; rates of economic growth increased spectacularly, the volume of world trade increased even faster; political independence swept two continents; international agencies grew in number and in stature; technological progress proceeded at an undreamed of pace, especially in the fields of genetics and agronomy; and major intergovernmental world conferences on Population, Environment, and Food were held. Yet, increasing numbers of rural poor have been left behind.

Besides the devious obstacles to harmonious rural development identifiable in the socio-economic structures of developing countries and in the prevailing international economic order, should not some assumptions implicit in agricultural development projects be indicted? The problem is not new and was so topical ten years ago that the directors general of the three international agencies primarily responsible for its solution convened a World Conference on Agricultural Education and Training in Copenhagen in July 1970. There, the communication gap was scrutinized. The major finding was that development policies and projects were all too often conceived and operated without regard for the necessary involvement of the very people they were intended to promote. Similarly, curricula in education at all levels were conceived from an academic standpoint and seldom reflected the basis and felt needs of the recipients. True for genuine national programs, these criticisms were even more relevant when international cooperation was concerned. The single most glaring failure was the practical absence of teaching and training materials in the languages of the peasants.

While no new global assessment of the progress in rural education has been undertaken since 1970, world education's qualitative improvement does seem somewhat more satisfactory than its quantitative growth. Sociologists have made a valuable contribution, and the presumptuousness of the international expert has abated noticeably.

In the field of concepts, international developments were influenced by some major events: the UNESCO report on "Learning to Be" (1972), the World Food Conference (1974), and the reorientation of the World Bank's program toward giving better service to the poorest of the poor. In all these activities, education and communication were treated as basic components of an integrated rural development strategy. At the same time, the concept of education was broadened and formal schooling lost part of its artificial supremacy to become a phase of life-long education. Exploring the consequences of these conceptual changes, the JAC in its 1973 report stressed that "education must correct the handicaps due to being born into an economically and culturally deprived environment" and that "absolute priority must be given to education geared to the economic and social development of rural areas seen not only as harboring the least favored sections of society but also as offering mankind its brightest prospects."

The universal acceptance of the essential role of integrated rural development is perhaps best illustrated by the decision to substitute for the Second World Conference on Agricultural Education (originally scheduled for the early eighties) a commission meeting within the framework of the forthcoming World Conference on Agrarian Reform and Rural Development to be convened by FAO in early 1979.

At the moment, three subjects in particular call for intensive research and study: first, the improvement of the "image" of agriculture, a goal that the educational system can further significantly by changing the attitudes of children; second, the strengthening and upgrading of the corps of middle and low level extension personnel; and, third, the realignment of the objectives of teaching at all levels to support integrated rural development.

■ **Roger Savary, International Federation of Agricultural Producers, Paris**

Call For Copy

Upcoming issues of *DCR* will focus on communication planning and policy-making, needs assessment, community development, family-planning activities, learning games, and formative evaluation in communication projects.

Knowledgeable and experienced readers are invited to submit manuscripts on these subjects to the editor. Articles on other subjects of interest to *DCR* readers will also be reviewed, since even theme-dominated issues will carry timely material on a variety of subjects.

Highest priority will be given to previously unpublished material, and every effort will be made to review every manuscript.

Liklik Buk — A Pocket Encyclopedia For Village Leaders

Communication has always been a challenge in Papua New Guinea — where over 700 languages are spoken. With the coming of independence in 1975, the need for a broad base of informed citizens compounded the considerable problems of information exchange.

Like many developing countries, Papua New Guinea accords high priorities to agriculture and rural development as means of decreasing both food imports and urban migration. These priorities often require communicating with those people most difficult to reach — rural villagers who may live in isolated spots and who probably speak only the language of their area.

How do we reach these people? Perhaps the most obvious way is through the people around them. Illiterate farmers, like all of us, need to have information presented in an understandable form. Charts and graphs on glossy paper are not very impressive to village farmers. Their assessments are usually made on the basis of evidence they can gather themselves.

For example, pigs in Papua New Guinea are traditionally allowed free run in the villages and surrounding areas. Only gardens are fenced. This system is easy to maintain — the pigs forage for food and sleep in or under the village houses. So, when farmers see a local school or agri-

cultural extension officer building a pig house, they scoff. "It is so much work to build a pig house and keep it clean, as well as bring food to the pigs. Hardly worth the effort!"

The scoffing farmers, however, keep a close eye on the project and, if it goes well, they may note that the pigs grow big, that the area is clean, and that the pig manure helps gardens and the crops grow well. The farmers may consequently decide to build pig houses. If they do, the school project will probably afford an opportunity to continue to observe and learn.

Such communication is usually between the farmer and someone he knows, someone who lives near him but who has a wider scope of acquaintances — a teacher, a pastor, or an agricultural extension officer. And this "someone" is probably literate.

Aiming at expanding this kind of communication, the Melanesian Council of Churches has come up with *Liklik Buk*, a rural development handbook/catalogue for Papua New Guinea, intended for literate village leaders who can communicate by doing.

Liklik Buk represents an effort to present in one book a wide range of possibilities and information. It contains short articles on crops, fertilizers, animals, health, simple technologies and processes, as well as lists of useful books and organizations. An article on a crop, for example, may contain some specific information on where to obtain seeds, how to grow them, what experience farmers have had with the crop in Papua New Guinea, as well as list where and how to obtain further information. In addition, the *Liklik Buk* Information Centre in Lae provides information in answer to readers' requests. It is also organizing a small library.

Liklik Buk has been well received both in Papua New Guinea and abroad. The second edition of 12,000 copies sold out in less than a year and is currently being reprinted. Agricultural training colleges, teacher training colleges, and the PNG Department of Primary Industry have been bulk purchasers. Comparable organizations from the Solomon Islands and other South Pacific island countries have also ordered the 'buk.' The book has found a large audience overseas among the 'back to earth' cult too.

As a sizable portion of village leaders are literate in Pidgin but not English, *Liklik Buk* is currently being translated into Melanesian Pidgin — quite a task since Pidgin is not a very defined or technical language. The Pidgin edition will be based on the second English edition, but the presentation will differ in view of the new target group.

The true impact of *Liklik Buk* awaits evaluation. But if robust sales mean anything, needed and once scarce information is making its way toward some of Papua New Guinea's most geographically and linguistically isolated people.

■ **Ed and Mini Arata, Liklik Buk Information Centre, Lae, Papua New Guinea**

Development Communication and The University

Can regional universities handle the prickly but essential job of integrating government nonformal education efforts in development communication at the community level? This might well be the real question behind a three-year exploratory study on communication technology for rural education that begins in the Philippines early this year, with World Bank funding, under the aegis of the Educational Development Projects Implementing Task Force (EDPITAF) of the Department of Education and Culture.

The new study is one component of a pilot project on the use of "cost-saving communication technology" — chiefly radio and the print media abetted by personal interaction — to expand educational opportunities in the countryside. Its test site is the University of the Philippines at Los Baños (UPLB), which has a strong College of Agriculture and whose avowed clientele is the rural poor.

Worked out in answer to the universal lack of development-communication teaching materials that can be plugged into the media, the exploratory study will also test a learning system through which such materials can flow and be used by target groups. The framework of the system already exists: the constellation of regional and farmers' training centers that make up the newly created Philippine Training Center (PTC).

Meant for the continuing education of trainers, extension workers, and local leaders, the PTC has its national office and regional center quartered at UPLB. Extra planks might have to be built into the framework to meet the unique requirements of the communication-technology study but, whenever possible, the study will ride on the PTC system, which it was in fact designed to complement in its pilot stage.

The development-communication study team must interact with assorted service, media, educational, and civic agencies currently engaged in teaching farmers, out-of-school youth, and other residents of rural communities. It will have to mind internal linkages too, for the university has its own sticky spots in which inter-disciplinary projects can bog down.

But the biggest task is dovetailing study objectives and operations with those of the other agencies ministering to the same clientele in the pilot site, since each organization has its own commitments and identity to uphold. The major agencies involved are the Departments of Agriculture, Natural Resources, Agrarian Reform, Local Government and Community Development, Public Information, the National Media Production Center, and the PTC.

The politics of inter-agency cooperation and coordination has always been thorny, in the production of development-communication materials as elsewhere. It is here that a regional university that has a relatively disinterested image, that is highly credible to the rural clientele because of its long-standing extension ties, that is half-in and half-out of the government bureaucracy, and that is thus less subject to pressure can make an acceptable coordinator. Its rural educational radio station and communication teachers and researchers are also plus-factors in this case. Probably its best asset, however, is its wealth of reliable and up-to-date information on agriculture and related fields — information that can be converted into media materials.

The content of the radio programs, print materials, farmer forums, and other supportive media of the Los Baños study is openly and unabashedly technology, a research-based practical and social technology of the sort that a university is best equipped to generate. Unlike similar radio projects elsewhere that stress the social unfolding of the individual, the Los Baños study, in the tradition of agricultural extension, sees economic, occupation-related information as the starter of development.

University scientists, even the agricultural kind, have always been subject to charges of ivory-tower research, sometimes with good reason. Today when "appropriate technology" and "popular participation" have become by-words in development, the equally current concept of technology transfer in relation to the rural poor comes under some suspicion. If this handicap persists, fielding scientists so that they may get an accurate reading of rural problems may be the answer. The development-communication study may have yet another potential avenue for dialogue: its multi-media rural communication system for the use of extension workers, local leaders, rural families and (to close the circle) service agency decision-makers.

If, later on, the exploratory study graduates into a full-blown project with other regional sites like the PTC, it is going to want many more development-oriented young people trained in operating educational community media. The regional universities can plan ahead for this and similar eventualities by taking a hard look at their communication and extension programs now — if, that is, they are among the new kind of universities coming up in the Philippines and in other developing countries that see themselves as full partners in rural development.

■ **Nora C. Quebral, Professor of Development Communication, University of the Philippines at Los Baños**

Folk Media Exchange

Ross Kidd of the Boipelogo Education Project in Botswana is building a collection of documents on folk media, the contents of which will be reflected in an annotated bibliography he plans to append to his doctoral thesis. Write to Kidd at Private Bag 005, Gaborone, Botswana.

A Communicator's Checklist

1 Some social scientists must go to incredible lengths to rescue common sense from a live burial by their colleagues, and Wilbur Schramm is on the side of the rescuers. He's a master synthesizer who knows a good idea when he spies one and who gives credit where it is due. Moreover, he indulges in few of those guilt-ridden exercises of revisionism whereby some academics try to "historicize" (that is, disown) their past goofs. Schramm is, in other words, well qualified to perform the task he has undertaken in *Big Media, Little Media — Tools and Technologies for Instruction:* a systematic assessment of the research on the uses, costs, and potential of educational media.

At once an inventory and a manifesto, *Big Media, Little Media* was written under a U.S. AID grant in 1974 and revised in 1977 in light of new research findings and extra time to reflect. As the title implies, Schramm's method of investigation in this book is comparison. What is not immediately apparent is the pervasiveness and complexity of the big/little contrast. At the most general level, Schramm expresses the opinion that it is time to concentrate on micro-research (research that, for example, "compares two or more ways of accomplishing a specified instructional task . . . for a given kind of student in a given situation") and to let macro-research (research that, for example, "compares the outcome when sixth-grade arithmetic is taught by a classroom teacher to the outcome when it is taught by an instructional medium") slide for a while.

Accordingly, he himself devotes less attention to distinguishing between the small fry and the big fish among media options (a fairly routine task once definitions are worked out) than to laying the groundwork for the development of a three-dimensional taxonomy of media uses, learning tasks, and learner needs (audience composition). Indeed, as if to astonish the mind's eye, Schramm adds a fourth dimension or range of considerations to this construct — cost-benefit and unit-cost analysis.

Given Schramm's firm commitment to resist absolutes and his equally firm belief that educational media planners will be more or less at sea until these various sets of categories can be put on the same grid or at least cross-referenced, it is not surprising that the taxonomy he dreams of does not emerge from his book. Schramm does not seem surprised anyway. He seems to recognize that his is a mid-wife's function and that by putting the findings of economists, psychologists, and media analysts into parallel forms and identifying the many research gaps, he is setting the stage for the work that remains to be done before all the pieces make sense. This recognition, in fact, probably accounts for Schramm's brave decision to treat learning theory, economic analysis, and technological capabilities as the one messy whole that they are instead of as independent variables that will combine in the same fashion and with the same results under all conditions.

As the chapter on the economics of mediated education suggests, nothing is without its costs. Even intellectual integrity. Schramm's willingness to entertain several sets of questions simultaneously and to bestride so much academic territory leads him into a few self-contradictions. Particularly confusing is his waffling on the question of appropriate technology: he uses the term "super media" throughout the book only to debunk it in the conclusion and states in Chapter 8 that "a combination of media is likely to accomplish more than any medium by itself" after quoting in Chapter 2 evidence to the effect that "in numerous conditions the use of two channels (to the brain) may be less productive than one."

Flaws and all, *Big Media, Little Media* stands a chance of becoming a classic text. It is full of examples and case histories, abundant in insight, broad in conception, and well worth reading.

Big Media, Little Media — Tools and Technologies for Instruction can be obtained from Sage Publications, Inc., 275 South Beverly Drive, Beverly Hills, California 90212, U.S.A. for $17.50 in cloth and $7.50 in paper. ■ **K.C.**

2 A propagandistic approach and a heavy dose of Swedish political thought are the two hurdles for readers of *Whither Video? Commercial Commodity or Public Property* by Margareta Ingelstam. Yet, the book is a valuable morning's reading for those considering videogram investment. If you know people in a national government currently wrestling with communications law, they may (to use a pitchman's phrase) thank you for recommending this English-language summary of an apparently longer Swedish work.

"Videogram" is the translation of a Swedish term for videotapes, videodiscs (a technology still in development), video cassettes or any picture or sound-and-picture material shown on a television set without broadcast reception. *Whither Video?* offers cursory analyses of the various systems available, including an incomplete rundown of specific brands, prices in Swedish Krona included (U.S. $1.00 = Skr 4.65, a fact not in the book).

This work includes what may be the first analysis of videogram use in library activities and community television production — areas in which Sweden is a world leader. Suggestions are offered on how videograms can be employed, and there are tips on the use of the new technology in teaching. (Don't allow educational material to run more than five to eight minutes, the logic goes, or group members get bored and impatient about having their say!)

The method chosen for distribution of pre-produced videograms is an issue considered critical to the future of the technology, and the author offers various options.

Ingelstam also steps onto the newly plowed ground of television's technological danger: not injury from X-rays or eye strain, but the growing fear that a TV-suckled society loses the ability to distinguish reality from unreality. She cites a range of studies to justify her statement that "all sound and picture programs involve particularly serious hazards for children." She worries about the human race being reduced to a "media mollusc," and she clearly hopes readers will at least consider the advantages of doing without television — a subject only now beginning to be discussed in the U.S., the world's most TV-saturated society.

One thing this book does not do is offer any true discussion of the issue cited in its title. The book is wholly on the side of government control of the technology, non-commercial development of videograms, and a videogram-distribution system divorced from commercial and mass marketing considerations. There is only one remark from the "commercial" side of this issue, that from a distributor of violent and sexually explicit films. It is a statement chosen to provoke loathing for the speaker's species in the stomach of every reader. Not even Walt Disney is spared. In the writer's mind commercial television is apparently all bathwater, no baby. Her viewpoint has been absent from most literature and criticism of the medium, particularly in the television-dominated U.S. media.

The book offers many video-development alternatives, and even two 1996 fantasy interviews with highly placed government decision-makers, "videologists," discussing the position and role of video under two differing scenarios of development.

"*Whither Video?*" is more a social/political document than a technical one. But then, how are decisions made where you are?

"*Whither Video? Commercial Commodity or Public Property*" can be obtained from TRU, Fack, S182 71, Stocksund, Sweden. Specifically request either the English translation/summary or the longer Swedish work ("Vad ska vi gora med video grammen? Handelsvara eller allman rikedom.")

■ **Scott Shuster, broadcaster and freelance writer, Washington, D.C.**

3 Those familiar with previous editions of the *Aspen Handbook on the Media* should respond enthusiastically to the expanded *1977-1979 Edition*. Others would do well to peruse this sourcebook, which provides its readers with a profile of American mass media research and of publications and institutions focusing on communication. In the early 1970s, the Aspen Institute Program on Communication and Society generated discussion on national communication issues and the policies needed to address these issues.

Thus, as editors William L. Rivers, Wallace Thompson, and Michael J. Nyhan point out, the *Aspen Handbook* concentrates on research, publications, government agencies, and other institutions "particularly concerned with national policy issues in mass communications." However, they add in their preface, this most recent *Handbook* reflects the rapid growth and broadened scope of the communication field, listing new conceptual categories, humanistic questions, and technological considerations. (It is more than four times its original size of 97 pages.)

The increased number of Canadian institutions reflects an attempt to make the *Handbook* descriptive of English-speaking North America and not just the United States. Indeed, Canadian-American commonalities abound: the joint use of the CTS satellite is just one example. Certainly, in future editions, the international and overseas parts of the *Handbook* will have to grow to keep up with what is burgeoning in the communications field.

The Aspen Handbook on the Media does not attempt to profile the communications industry. That behemoth was tackled by Christopher H. Sterling and Timothy R. Haight in the recently published *The Mass Media: Aspen Guide to Communication in Industry Trends*. Rather, the *Aspen Handbook* selectively provides comprehensive and current information on (1) universities with research programs and communication departments, (2) non-academic institutions conducting communication research, (3) organizations supporting communication research, (4) communication organizations of every sort, (5) media action groups, (6) U.S. and Canadian government communication policy-making bodies, (7) communication law courses, (8) international and overseas communication organizations, (9) special libraries and resources on communications, (10) communication periodicals and books, (11) communication bibliographies, (12) selected films on communications, and (13) an index to it all.

For those interested in applications of communication technology, a new section on film — films about television, radio, newspapers, and future technology — should hold particular interest.

Careful attention has been given to the descriptive annotations so that one who has spent some time with the *Handbook* should have a good sense of American communication trends and policies, and the editors have provided ample source names and addresses for further investigation.

The 1977 edition of the *Aspen Handbook on the Media* can be mail-ordered from Aspen's Publishing Program Office, P.O. Box 1652, 360 Bryan, St., Palo Alto, CA 94302, U.S.A. for U.S. $6.95. ■ **J.M.**

4 *VTR Workshop: Small Format Video* by Lovetta J. Atienzu is a basic how-to manual for the communication field agent without technical training and with an interest in using portable video equipment.

The monograph describes half-inch portable video hardware and outlines steps for making tapes, editing, and setting up home-base and mobile facilities. The technical chapters are limited to coverage of half-inch "portapak" type equipment and are reminiscent of material in several video handbooks that appeared in the U.S. in the early 1970s. However, particular attention is paid to problems the development worker is likely to encounter with the equipment in the field.

Unfortunately, the applications or "why use it" section falls at the book's end. The apparent, but dubious, assumption is that the reader is already familiar with developmental applications of video.

VTR Workshop: Small Format Video, one of the UNESCO series called Monographs in Communication Technology and Utilization, costs $3.00. It can be mail-ordered from UNESCO, 7 Place de Fontenoy, 75007, Paris, France.

■ **Heather Hudson, Academy for Educational Development**

5 Clearly, the aim of Rex Keating and the International Planned Parenthood Federation in publishing *Grass Roots Radio* was to demonstrate how to use radio as a development tool. To that end, they expect their audience to be fieldworking personnel in developing countries. Keating and IPPF hope that by showing how to use radio, its use will be expanded and integrated into the local communication structure.

The author goes into some detail about broadcasting operations, the inner workings of the tape recorder, the basics of interviewing, and script-writing. He also gives a number of case histories.

All this material is useful and accessible to the readers, however, only if they are comfortable with technology in general and have a fairly sophisticated command of English. As a consequence, the manual is, in effect, put out of the reach of those for whom it was intended.

Grass Roots Radio can be obtained for U.S. $5.00 from IPPF, 18-20 Lower Regent Street, London SWIY 4P ' ENGLAND. Prerecorded tape cassettes of examples of the use of radio in family-planning efforts around the world also cost $5.00 each. ■ **J.B.**

6 At the recent International Development Conference in Washington, Phillip Coombs reiterated a series of long-standing arguments (some as old as 25 years) for stressing local participation in the design and implementation of development programs. The new focus on "reaching the poorest of the poor" has, in fact, led some planners to believe that project design and implementation must actively involve the very "lowest" groups of society, not just country-government officials. This approach is often characterized as "bottom-up" or grassroots development.

Jeanne Moulton's doctoral dissertation, *Animation Rurale: Education for Rural Development*, makes a timely contribution to this discussion. Moulton takes an exhaustive look at the 18-year-old African experiment in *Animation Rurale*, focusing on its historical origins, its theoretical infrastructure, and its practical results in Senegal and Niger.

Animation Rurale, theoretically at least, is an attempt to carry local participation to one of its logical extremes. It emphasizes the practical preparation of rural people for economic development, stresses indigenous cultural values over colonial ones, focuses on the capacity of rural people to determine their own development destiny, reflects the belief that rural development is a social rather than an individual phenomenon, and proposes that the transformation of the people at the bottom necessarily involves the transformation of whole institutions.

Animation Rurale differs from its Anglo counterparts. As Moulton suggests, its French Catholic historical context makes it more hierarchical and authoritarian than the methods favored by many Anglo observers. But *Animation Rurale* does nevertheless appear to be a long-term, structured, and systematic attempt to achieve grassroots development.

In a creative review of four development theorists, Moulton leads the reader to conclude that *Animation Rurale* failed to achieve its principal objective, the involvement of rural people in the decision-making processes of development.

It is at this point that Moulton's argument loses power. Her suggestion for making *Animation* work amounts to little more than the reiteration of the shopping list of pre-conditions that planners have been demanding of developing countries for years: top-level support, decentralized decision-making, financial resources to support long-term training, political stability, etc. Not exactly the pre-conditions for development, these ingredients represent development itself. Indeed, if these conditions do represent the prerequisites of change, then grassroots development may be hopelessly impractical.

This study is compelling because it raises important and timely questions. If international agencies are focusing on the poorest of the poor, if grassroots dogma is again being dusted off, polished up, and publicly touted, then should we not ex-

amine programs like *Animation Rurale* closely and determine first if inherent flaws mar such proposals? Certainly other development projects have been weakened by the seemingly unavoidable conflict between the needs of ruling elites and the requirements of social development. Moulton demonstrates how the practical demands of power politics can take precedence over the needs of poor people, even in the presence of a supportive charismatic leader. What is there in our new proposals to suggest that idealistic motives will fare any better this time?

Much of the book is devoted to a description of how *Animation Rurale's* theoretical concepts were applied in Senegal and Niger. While the histories of the programs vary, their results are strikingly similar. In both cases, the theory was never fully implemented. More important, the original goals and processes of *Animation Rurale* were distorted, often beyond recognition, by the practical political needs of the ruling elites in both countries. While the Senegalese program enjoyed a three-year honeymoon during which time government officials supported the involvement of rural people in national decision-making, the demands of rural people ultimately became more an obstacle than a contribution to the maintenance of power. The Senegalese goals of 1960 centered on rural consciousness-raising; by 1968 they emphasized civic and moral training, and by 1971 they focused almost exclusively on technical training. As Moulton states:

> "Whereas animation did not lose the ideological support of those at the national level who had conceived it, pressures from various interest groups forced a conflict to be resolved on the national level which resulted in curtailment of the program. After 1962 the vigor of *Animation Rurale* began to dissipate."

The coercive influence of power politics on local participation was even clearer in Niger, where the absence of a national ideology similar to President Senghor's African Socialism confined the program to a scattering of patchwork projects and contributed to its domination by French experts whose presence made program goals less acceptable and less understandable to rural participants.

The results of this study are valuable because they call some strong and widely held beliefs about development into question. They constitute a reminder that fighting the results of poverty is probably more satisfying personally but ultimately less essential than entering political battles in the halls of power.

Animation Rurale: Education for Rural Development can be obtained for U.S. $5.00 from the Center for International Education, University of Massachusetts, Amherst, Massachusetts 01002, U.S.A.

■ **Bill Smith, Academy for Educational Development**

7 While far from breathtaking, the *Report on the Conference and Workshop on Nonformal Education and the Rural Poor* is livelier than many documents of its ilk. More questioning than declarative, it is occasionally airy but seldom windy. And — good news for the report-weary — its editor and the *rapporteurs* resisted the temptation to see every discussion as the stuff of which a consensus is made, so it packs a few surprises.

Less to its credit, the *Report* gives at its weakest seams. A few early sections embrace too much material. Others contain so many lists that the reader feels disposed to treat them as reference works and to browse rather than pay close attention.

More down-to-earth are the hundred or so pages devoted to reviews of specific projects. Chapter Four covers three rural development projects that use nonformal education principles. Chapter Five focuses on the use of nonformal education in nutrition, health delivery, and family-planning projects. Chapter Six explores consciousness-raising efforts in rural Ecuador, Guatemala, and Botswana. These project reports, shortened versions of papers delivered at the conference by project evaluators or managers, vary in length, focus, and degree of documentation, but all represent solid and easily assimilable research. Similarly, each leaves some scores unsettled, but all deserve to be considered part of the basic literature on education in development efforts.

This last point leads irresistibly to another, which is that much of the best material in this report is reprinted and abridged. Only the small-minded need blindly uphold the copyrighter's cause, but a reader cannot be blamed for preferring to lay hands on the real thing and for expecting a new book to offer what existing publications do not. True, the repetition is not irritatingly extensive, but the problem touches upon the fundamental question of audience identification: What sort of use will those for whom the book is intended make of six excerpts, even six such provocative excerpts?

Accounts of the panel discussions featured at the conference are easy enough to reckon with, though perhaps too brief to be of much practical value. In the summary of the forum on using media systematically in nonformal education, misconceptions (about the rural poor) that hamper successful communication planning are pinpointed, and the social and economic considerations that media designers must address before selecting a communication medium for a particular area and message are identified.

The resume of the panel called "Improving the Performance of Nonformal Educators" zeroes in on ways to develop fieldworkers' nonformal education skills. This panel discussion apparently echoed the theme of the whole conference, which was "not to probe the mysteries and complexities of rural development *per se*, but to explore on an 'interdevelopmental sector' basis . . . better ways of relating nonformal educational concepts and methodologies to the central needs of the rural poor."

Parallel to this last high-minded purpose is another — "to explore on an 'interdevelopmental sector' basis . . . better ways of relating nonformal education concepts and methodologies to the central needs" of those who would use them to help the rural poor. This book represents a fair stab at fulfilling both objectives.

Edited by Richard O. Niehoff, *Nonformal Education and the Rural Poor* can be obtained from the Institute of International Studies, The College of Education, Michigan State University, East Lansing, MI 48824, U.S.A. ■ **K.C.**

8 Appropriately enough, "Communicating with Pictures" is heavily illustrated. At the proverbial thousand words per picture, it speaks volumes in 28 pages. But the sparse text is essential, primarily because one of the main points made in the pamphlet is that, by themselves, pictures can rarely be counted upon to convey ideas precisely and forcefully.

This broadside contains the findings of a study carried out in 1976 and samples of the visual aids tested. It is the record in shorthand of a joint attempt by UNICEF and Nepal's National Development Service to answer three questions: 1) Can pictures alone communicate ideas and information to villagers? 2) What kinds of pictures do villagers find most meaningful? 3) Do different colors possess special meanings for villagers?

In brief, the team found that villagers need help in interpreting illustrations but that, once explained, pictures can effectively convey and keep alive important new ideas. It found that the visual imagination requires priming, that nonliterate villagers are most apt to "get the message" if it is borne by photographs doctored so that all inessential information is blocked out, and that colors, like words, have powerful culturally influenced connotations. It also made many other less general discoveries — all of which are taken into account in the researchers' recommendations.

Whether the specific findings of this study mean anything outside of Nepal is anybody's guess. But the general conclusions are well-reasoned and ought to be welcomed by a wide audience. As a bonus, this pamphlet helps readers identify their own preconceptions about the meaning of visual signs and lets them in for a few painless surprises.

"Communicating with Pictures" can be obtained from the National Development Service, Kirtipur Campus, Tribhuvan University, Kathmandu, Nepal. ■ **K.C.**

The editor welcomes disinterested reviews of new or neglected books on communication technologies, methods, or issues.

Next Time (Continued)

adequate for Ph.D.s, M.A.s, and college graduates. The greater need is for people who can be trained to work directly with farmers who are ready and able to adopt some simple practices that can increase production. I would recognize the need for para-agriculturists, akin to para-medics like the Chinese "barefoot doctors."

Go easy on equipment. I would be wary of buying too much modern sophisticated communication equipment. The desire to acquire more audio-visual and related equipment, especially when foreign funds are available, is hard to resist. But many audio-visual consultants have failed to carry through on use once the equipment has been acquired.

Decentralize and localize. I would localize operations to the greatest possible degree. A paragraph on what a local farmer does is worth more than pages of speeches by a faraway dignitary. Similarly, I would make sure that radio programs came from a source local enough to reflect local conditions.

Exhibits developed locally would be better than fancier but over-generalized ones from the state capital. I saw dramatic proof of the value of decentralization when a booster radio station in India was converted to broadcast live. When farm programs were localized and translated into the local dialect, farm listening jumped.

Maximize distribution. I would try to maximize the distribution of the available information. Typically, information workers in both developed and developing countries produce adequate information messages and materials, but fall short in distributing their product. In more positive terms, one of the most successful demonstration programs I saw in India featured a large number of field demonstration plots located within walking distance of the local farmers.

Keep track of research. I would encourage greater awareness among counterparts of current research and would promote application of new research as it becomes available.

Finally, I would recognize that the impact one consultant can have is, at best, miniscule. I would be resigned to making small gains and hope that they might outlast me. ■

Development Communication Report, published quarterly by the Clearinghouse on Development Communication, is distributed free to over 6000 development professionals.

A center for materials and information on important applications of communication technology to development problems, the Clearinghouse is operated by the Academy for Educational Development, a nonprofit planning organization, and supported by the Development Support Bureau of the U.S. Agency for International Development as part of its program in educational technology and development communication.

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Readers are invited to submit typed manuscripts of no more than 1000 words and to send in photographs.

Highlights of the Fifth Pan-African Literacy Seminar

"Do-it-yourself" was the byword of the Fifth Biennial Pan-African Literacy Seminar, held in Nairobi, Kenya, from December 13 to December 22, 1977.

The overall task of the seminar, which was held in cooperation with the Ministry of Housing and Social Services of the Republic of Kenya and other Kenyan agencies, was to permit adult literacy workers, other extension educators, and journalists to examine the main approaches to adult literacy work used in Africa today. The simultaneous interpretation of most sessions permitted rich exchanges between Francophone, Anglophone, and Spanish-speaking delegates. Reflecting the theme of *Literacy Materials and Methods*, which occupied morning plenaries and seminar sessions, were two sub-themes discussed in smaller groups: the rural press and appropriate techniques for evaluating literacy materials and programs.

At daily plenary sessions, 130 delegates from 27 countries heard reports from Tanzania, Kenya, Botswana, Colombia, and Ghana on new methods of combatting adult illiteracy. The main purpose of these plenaries was to show how traditional skill-building techniques can be merged with psycho-social emphases on learner participation and on meeting learner needs in curriculum design.

Reports by Mary Eyakuze, Director of the Mwanza National Literacy Centre, Daniel Wabwire and Mary Opiyo of the National Christian Council of Kenya, and a team led by Ross Kidd and Lesetse Matshaba of Botswana Extension College covered the use of picture codes related to adult needs expressed by the learners and ways to develop literacy skills by using "generative terms."

Innovative efforts to involve pupils in preparing reading materials were presented by the director of the Laubach program in Colombia, Dr. Luis Londono. His stress on teacher-learner cooperation as a means of identifying pertinent themes and of involving new literates in the expression of their own ideas and knowledge in developing follow-up literature underscored the "do-it-yourself" emphasis.

The director of the Bureau of Ghana Languages, Mr. Felix Konu, spoke about the early impact of a local language strategy (applied in Ghana as long ago as 1951) on post-literacy materials and on the rural press. (The Ghanaian program featured rural newspapers in four major languages.)

A review of the reports suggests that the major difference in the production techniques discussed is between reliance upon photographs versus the heavy use of line art. The photos used in the Kenyan programs, for example, had been carefully selected, and shots with noncontrastive or crowded backgrounds were avoided. The Botswana program relied on line-drawings for its code pictures.

Delegates were free to attend one of two working groups in the afternoons. The workshops were devoted to practical presentations and discussions. The rural press workshop concentrated on the production of post-literacy newspapers or booklets at the village level, and on means of involving new readers in the preparation of materials and the choice of subjects.

Key duplicating and offset processes for producing rural newspapers were reviewed by N.E. Lingard of Gestetner of East Africa, Ltd., and by Mr. M. Kaboye of the National Literacy Centre in Niamey, who demonstrated the silk-screen duplicator (or "limographe") used in Niger. Here, too, the seminar participants were able to work on the production of newssheets at a "do-it-yourself" level.

The seminar workshop, led by M. Amadou Berthe, National Director of the Literacy Centre of the Republic of Mali, divided into Francophone and Anglophone task forces. Each one produced a duplicated rural-type newspaper. The Francophone version could have been done in any village, as the master copy on stencils was handwritten on twelve handsome two-column pages and included only line drawings. The Anglophone edition was a simulated village paper, though the materials were typed. It carried several well-executed line drawings that highlighted characteristics of the Biennial Seminar — the "village" at hand.

The evaluation workshop drew about half of all the seminar participants. For expediency's sake, it was also subdivided into two groups. One debated the larger subject of participatory versus external observer evaluation before discussing specific program components that require evaluatory techniques. The second, led by Dr. Dennis Lowry of Temple University's School of Communications and Theater in Philadelphia, studied specific "do-it-yourself" evaluatory techniques.

A new evaluatory procedure that won the approval of most of the participants for "do-it-yourself" use was the Cloze test. Dr. Lowry demonstrated the application of the Cloze test in self-made research designs for checking reader comprehension of reading materials used in class.

Both the final report of the Biennial Seminar and the participants themselves have recommended that follow-up seminars be organized on a regional basis to allow more people to benefit from them. Follow-up seminars on writing for new readers and on using screen-duplicator equipment are already planned.

A seminar report containing the main plenary presentations and including the final report of the seminar groups and the workshops will be produced by Afrolit Society for its members and published in July of 1978. Inquiries about the report and about the follow-up seminars can be addressed to Afrolit's General Secretary.

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HOW I'D DO IT NEXT TIME: Reflections of an Agricultural Information Consultant

Readers expecting to find "Dilemma in Country X" here in its customary place need not despair. The following article represents the distillation of many dilemmas encountered over many years in many countries. It was written by Dr. R. Lyle Webster, whose long and eventful career in agricultural communication has included stints as the Director of Information of the U.S. Department of Agriculture, as a consultant on communications and agricultural information with the Ford Foundation in India, and as the first director of the East-West Communication Institute in Honolulu.

Dilemmas in Country X: Candid discussions about failures *will be featured again in the next issue. The editor invites readers to submit reports for this column and will upon request withhold authors' names — as well as those of the people, agencies, and countries involved in the projects described.*

After a lifetime of communication work, mostly in agriculture, I have a few firm ideas about how I would undertake another foreign consultancy. If I were to become a foreign agricultural communication consultant again, I would abide by certain basic commandments.

Understand the importance of attitude. My basic attitude would reflect tolerance and humility. I would recognize that not all knowledge resides in the country from which I come. I would keep in mind the fact that, largely as a result of development work of the last few decades, most poor countries have substantial numbers of people who have studied and trained abroad. I would believe that these people could achieve results when supported by the prestige and competence of a wise consultant. My resolve would be to keep a low profile, to listen more than talk. I would vow, above all, to avoid that self-defeating occupational disease — trying to do it myself rather than helping my counterpart perform the task at hand.

Capitalize on culture shock. I would brace myself for some "culture shock" when going to another country. But I would try to prepare for and to capitalize on it, knowing that I could really understand a culture only after living in it. Culture shock can bring about sympathetic understanding. But for some, I fear, the end result is in reality only a feeling of how different "they" are from "us" (and, all too often, a rather disdainful attitude toward the way "they" do things). I would never forget that my clients have a history and a culture and a way of living that has met many of the intellectual and spiritual needs of the people for centuries.

Appreciation of another culture is difficult, but one can cultivate it by reading and by contacting people who have had experience living in it. My two years at the East-West Communication Institute in Honolulu after my experience as a foreign consultant gave me a rich understanding of the importance of knowing the culture of a country in which one works. I often reflect on how much more effective I could have been as a consultant if my time at the East-West Center could have been put in at the beginning of my career.

Talk the language. My language would be that of the people I was working to aid. Despite all the arguments about studying a language that "we won't use again," my firm belief is that if consultants are able to communicate, no matter how badly, in the local language, they will be respected for trying.

I would hope to live simply and unostentatiously. Foreign consultants need not live in village huts, but living in luxury often offends the sensibilities of their co-workers from the host country.

Maintain close contacts. I would accept only those consultancies associated with programs that call for real continuing contact with farmers and that allow consultants to make actual contact. I also would want to be certain of my precise duties and responsibilities.

Look and listen. I would stress communication that can be absorbed by looking and listening. This means radio and visual means (but not necessarily a lot of audio-visual equipment). I cannot quarrel with *DCR's* "Reconsidering Print" issue: Print has its place. But I would remember that most people who need help are not literate enough to rely mainly on what they learn from the printed word.

I would, however, encourage the use of mass media to reach influentials. For example, the press should be used to reach the leaders in a country. A national newspaper will not print fertilizer-dosage recommendations (and most of its readers would not have use for them). But it is interested in economic progress, and the key people in the country's government — its legislators, business leaders, and academicians — all read.

Value in-service training. I would accord high priority to in-service training. After six years in India, I concluded that greatly increased in-service training was the most urgent need in the communication component of agricultural development there.

Indeed, many countries now have enough trained professionals in most fields. What is needed is greater competence among a larger number of persons who work as liaisons between the professionals and the farmers. The supply line is

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